

## TUB POND.

<i>Coscinodiscus excentricus</i> E.	<i>Hyalodiscus stelliger</i> Bail.
<i>Coscinodiscus nodulifer</i> A. S.	<i>Navicula peregrina</i> E.
<i>Coscinodiscus radiatus</i> E.	<i>Tropidoneis Lepidoptera</i> (Greg.) Cl.

## SOUTH POND.

<i>Coscinodiscus excentricus</i> E.	<i>Navicula formosa</i> Greg. (Dominant form here).
<i>Eupodiscus Argus</i> E. (= <i>Aulacodiscus Argus</i> (E.) A. S.).	<i>Navicula</i> ( <i>Stauroneis</i> ) <i>Gregorii</i> Ralfs
<i>Grammatophora macilenta</i> W. S.	<i>Navicula peregrina</i> E.
<i>Hyalodiscus stelliger</i> Bail.	<i>Rhabdonema Adriaticum</i> K.
<i>Melosira sulcata</i> K.	<i>Tropidoneis Lepidoptera</i> (Greg.) Cl.

(To be continued.)

## A NEW SPECIES OF RHIZOPOGON FROM NEW HAMPSHIRE.

DAVID H. LINDER.

(Plate 148.)

THE genus *Rhizopogon*, a member of the *Hymenogastraceae*, belongs among the higher *Basidiomycetes*, and is a group of puffball-like subterranean fungi. It differs from the puffballs in that the gleba does not break down and leave a cavity filled with spores and capillitium, but retains the septa that divide the persisting gleba into small cavities which at maturity are filled with spores and have no capillitium.

It was the writer's good fortune while spending the summer at Camp Algonquin in Holderness, New Hampshire, to find there in moist woods consisting chiefly of white birch,—*Betula alba* var. *papyrifera* (Marsh.) Spach,—but with here and there a group of hemlock trees, a fungus resembling *Rhizopogon occidentalis* Z. & D.<sup>1</sup> It was on an old, almost decayed stump in one of these groups of hemlock trees that this hypogeous fungus was found where it had been dug from near the base of the stump, presumably by a chipmunk which had carried it up to eat at leisure, and there had left it on being frightened by passers-by.

The fungus when fresh was bright lemon-yellow, subglobose, and slightly lobed, measuring somewhat over three centimeters in diam-

<sup>1</sup> Zeller, S. M., & Dodge, C. W.—'Rhizopogon in North America.' Ann. Mo. Bot Gard. 5: 1-36. 3 pls. 1918.

eter. The fibrils at that time were inconspicuous. While drying, the plant emitted a faint odor, resembling that of the Phalloids.

Now that the specimen is dry, the peridium is chamois to honey yellow<sup>2</sup> in color and the fibrils have become conspicuous as mummy brown filaments adhering to the peridium and ascending from the base to near the summit. The peridium is composed of more or less loosely interwoven hyphae and is 120  $\mu$  thick; the gleba is cinnamon buff and broken up into irregular rounded cavities; septa narrow, 16–27  $\mu$  broad, compact; basidia inconspicuous, borne at an acute angle to the septa, hyaline, 13–15  $\times$  7  $\mu$ ; sterigmata 3–4.5  $\mu$  long; spores acrogenous, cream colored, broadly ellipsoidal, with truncate base, 6.8–7.2  $\times$  3–4.5  $\mu$ , smooth.

This species, while externally resembling very closely *R. occidentalis* Z. & D., differs in many respects. It has a thinner peridium, made up of more loosely and irregularly interwoven hyphae, and has not the dense and more deeply colored surface layer; the septa are narrower and have not the specialized and deeply staining hyphae found in *R. occidentalis*; the basidia are broader, more inconspicuous, and are borne at an acute angle to the septa, while those of *R. occidentalis* are perpendicular to the septa; the spores are broader, in proportion to their length, than in the previously mentioned species and have a truncate base. For these reasons, the New Hampshire fungus is made a new species, as follows:

**Rhizopogon truncatus** sp. nov.—Fructificationes subglobosae et irregulares, diametro 3 cm. metientes, citrinae recens lectae, odor languidus, *Phallo duplicato* similis siccus, “chamois” vel “honey yellow” (Ridgway); funiculi applicati, “mummy brown” (Ridgway) siccati; peridium tenue, 120  $\mu$  crassitudine, simplex, byssoideum, hyphis tenuibus contextum, “maize yellow” (Ridgway); gleba siccata “cinnamon buff” (Ridgway); locelli globosi aut irregulares vacui; septa 16–27  $\mu$  crassitudine, hyphis hyalinis contexta; basidia late clavata, 13–15  $\times$  7  $\mu$ , hyalina, sterigmatibus longis, 3–4.5  $\mu$ ; sporae truncatae, late ellipsoideae, cremeae, 6.8–7.2  $\times$  3–4.4  $\mu$ , leves.

Habitat sub foliis. New Hampshire. Aestate.

Type in Farlow Herbarium.

The writer wishes to acknowledge his indebtedness to Dr. C. W. Dodge whose collection was placed at his disposal for purposes of comparison.

HARVARD UNIVERSITY.

<sup>2</sup> Ridgway, R.—Color Standards and Nomenclature. Washington, D. C., 1912, used throughout for comparison.

## EXPLANATION OF PLATE 148.

All drawings of this plate were made by the aid of a camera lucida. Scale = 10  $\mu$  in each case. The magnifications given below are merely approximate.

Fig. 1. Low power drawing to show the nature of the peridium of *Rhizopogon occidentalis*. The compact and more deeply colored outer layer at the left and the crowded, intertwining, almost parallel middle region contrast strongly with the loosely interwoven hyphae of the peridium of *R. truncatus*. Mounted in 10% glycerine.  $\times$  273.

Fig. 2. A group of spores of *R. occidentalis* showing their narrow elliptical form. Mounted in eosine-glycerine.  $\times$  1125.

Fig. 3. Spores of *R. truncatus* drawn to the same scale as Fig. 2 to illustrate the ovoid-elliptical, truncate shape, and the dark deeply staining basal region. Mounted in eosine-glycerine.  $\times$  1125.

Fig. 4. A typical basidium of *R. occidentalis* with its short sterigmata. In eosine-glycerine.  $\times$  825.

Figs. 5-6. Typical basidia of *R. truncatus* with their stouter and more elongate sterigmata. Drawn from material crushed in 10% eosine and glycerine.  $\times$  825.

Fig. 7. Low power drawing of the peridium of *R. truncatus*. Note the irregular outline of the peridium,—on the left,—and the loose tangled hyphae of which it is composed. Bundles of hyphae may be seen running at right angle to the plane of the section. Mounted in 10% glycerine.  $\times$  273.

## LEPIDIUM LATIFOLIUM IN NEW ENGLAND.

ALBERT P. MORSE.

IN late July of this year Mr. R. B. Mackintosh of Danvers brought in for the Peabody Museum flower-table specimens of a cruciferous plant whose bushy habit of growth, with tough, branching stems and spreading corymbose, fine white inflorescence, was suggestive of that of our common *Ceanothus americanus*. The immature fruit pointed to *Lepidium* or its proximity. Search in our local Essex County herbarium and in the New England collection at the Boston Society of Natural History failed to disclose the plant; nor was it to be found in that of the New England Botanical Club at Cambridge. Through the kind efforts of Dr. N. C. Hirschy of Berea College, who was at the Gray Herbarium at the time, it was satisfactorily identified as the Old World *Lepidium latifolium* L.

This is a widely distributed species, being found in many parts of Europe except in high altitudes and latitudes, in North Africa, and in southwestern Asia as far east as Turkestan and Thibet. It is also common in Mexico, probably having been introduced from Europe.